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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

PIERCE, JEREMY R

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/674,152

Applicant(s)

HAYAKAWA ET AL.

Examiner

Jeremy R. Pierce

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on February 28, 2005 has been entered. Claims 11-15 have been amended. Claim 16 has been cancelled. Claims 11-15 are currently pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moretz et al. (U.S. Patent No. 5,269,720) in view of Mouri et al. (U.S. Patent No. 5,690,922).

Moretz et al. disclose a knitted composite fabric comprising a moisture transport fabric layer and a moisture dispersal fabric layer used in a brassiere (Abstract). Moretz et al. do not disclose adding a white pigment. However, white pigment, such as titanium oxide, is commonly added to fabric material. Mouri et al. disclose adding titanium oxide to fiber in an amount of 0.1 to 25% by weight in order to create a deodorizing effect (Abstract). Mouri et al. teach that such fibers find particular use in underclothing (column 15, line 58). It would have been obvious to one having ordinary skill in the art

Art Unit: 1771

to add titanium oxide to the liquid transporting and dispersing fibers of the undergarment of Moretz et al. in order to enable the fibers to have a deodorizing effect, as taught by Mouri et al. With regard to claim 13, Moretz et al. disclose adding stretch yarns into the fabric (column 3, line 52). With regard to claim 14, although Moretz et al. do not explicitly teach the claimed property limitations, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. water diffusible fibers) and in the similar production steps (i.e. formed into a composite fabric) used to produce the brassiere. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the apparent density, water-retention ratio, and diffusion area are all result effective variables that affect the ability of the fabric to hold and disperse liquid. It would have been obvious to one having ordinary skill in the art to optimize the composite fabric of Moretz et al. in order to obtain the desired density and water retention ratio of the fibers, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moretz et al. in view of Mouri et al. as applied to claim 11 above, and further in view of Unitika (JP 62-53438 with English Abstract Provided).

Moretz et al. do not provide W-shaped cross section fibers in the wicking layer, but do desire the fibers in that layer to have a high surface area in relation to volume (column 3, lines 19-20). The '438 Patent teaches W-shaped cross-section fibers,

Art Unit: 1771

known for their high surface area, are used in composite fabrics to provide water absorbing and transporting functions (Abstract). It would have been obvious to one having ordinary skill in the art to use W-shaped cross-section fibers in the wicking layer of Moretz et al., in order to provide a means to obtain the desired high surface area in relation to volume desired by Moretz et al.

5. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rock et al. (U.S. Patent No. 5,896,758) in view of Mouri et al.

Rock et al. disclose a fabric that enhances the transport of body fluids (column 1, lines 35-37). The fabric is constructed of at least two knitted layers (column 1, line 64 – column 2, line 7). The body-contacting layer is rendered hydrophilic in order to transport moisture away from the skin (column 2, lines 20-25). Rock et al. do not disclose adding a white pigment. However, white pigment, such as titanium oxide, is commonly added to fabric material. Mouri et al. disclose adding titanium oxide to fiber in an amount of 0.1 to 25% by weight in order to create a deodorizing effect (Abstract). Mouri et al. teach that such fibers find particular use in all types of clothing, including footwear (column 15, lines 46-67). It would have been obvious to one having ordinary skill in the art to add titanium oxide to the spacer fabric of Rock et al. in order to enable the fibers to have a deodorizing effect, as taught by Mouri et al. With regard to claim 13, Rock et al. teach incorporating elastic yarn into the fabric (column 3, lines 12-14). With regard to claim 14, although Rock et al. do not explicitly teach the claimed property limitations, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. water diffusible

Art Unit: 1771

fibers) and in the similar production steps (i.e. formed into a composite fabric) used to produce the spacer fabric. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the apparent density, water-retention ratio, and diffusion area are all result effective variables that affect the ability of the fabric to hold and disperse liquid. It would have been obvious to one having ordinary skill in the art to optimize the composite fabric of Rock et al. in order to obtain the desired density and water retention ratio of the fibers, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rock et al. in view of Mouri et al. as applied to claim 11 above, and further in view of Unitika.

Rock et al. do not provide W-shaped cross section fibers in the water dispersing layer. The '438 Patent teaches W-shaped cross-section fibers are used in composite fabrics to provide water absorbing and transporting functions (Abstract). It would have been obvious to one having ordinary skill in the art to use W-shaped cross-section fibers in the water dispersing layer of Rock et al., in order to improve the rate at which sweat is transported away from the skin.

Response to Arguments

7. Applicant's arguments filed February 28, 2005 have been fully considered but they are not persuasive.

Art Unit: 1771

8. Applicant argues that the layers of Moretz are reversed compared to the present invention. However, the recitation of the fabric being an article of clothing is a recitation of an intended use. The combination of Moretz with Mouri meets all structural claim limitations. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). The claims are drawn to a two-layer structure. Which layer is the outer layer and which layer is the inner layer only depends upon the viewpoint of the person looking at the fabric. Recitation that a certain layer is meant to be the top surface when used as an article of clothing is only reciting an intended use. The intended use of an article is not given patentable weight in the claim.

9. Applicant argues that a person of ordinary skill in the art would not add the titanium oxide to the top, surface layer of Moretz, but rather the inner most layer because that is the layer closest to the source of the odor. However, the Examiner believes that a person of ordinary skill in the art would add the titanium oxide composition to both layers of Moretz because the garment of Moretz is an undergarment, and both top and bottom layers would be prone to the malodorous effects of the human body. The garment is designed to disperse sweat away from the

Art Unit: 1771


user. The sweat, which is the cause of the bad odor, would be found in both layers of the fabric, not just the inner layer. In order to effectively neutralize these odors, one would subject the entire garment, including both inner and outer layers, to the treatment taught by Mouri.

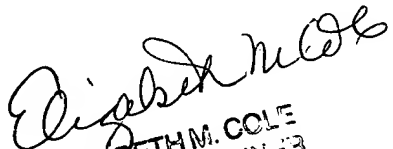
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (571) 272-1479. The examiner can normally be reached on Monday-Friday between 9am and 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeremy R. Pierce
March 30, 2005


ELIZABETH M. COLE
PRIMARY EXAMINER